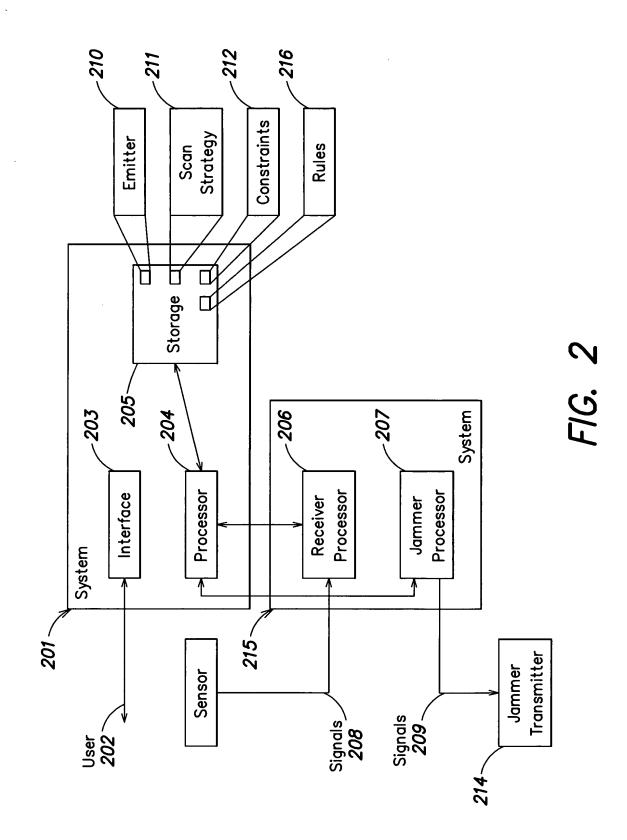
System And Method For Non-Maximum Dwell Duration Selection For Use In Detecting Emitter Signals GOUNALIS, Anthony J. Serial No.: 10/675,528 Docket No.: L0562.70041US00 FEB 2 6 2004 MADEM: 24 **Threat** Emitter Emitter Signal A 705A Threat $\mathbf{\omega}$ ⋖ Signal B 105B Processor Receiver System Detection System System 108A

GOUNALIS, Anthony J. Serial No.: 10/675,528 Docket No.: L0562.70041US00



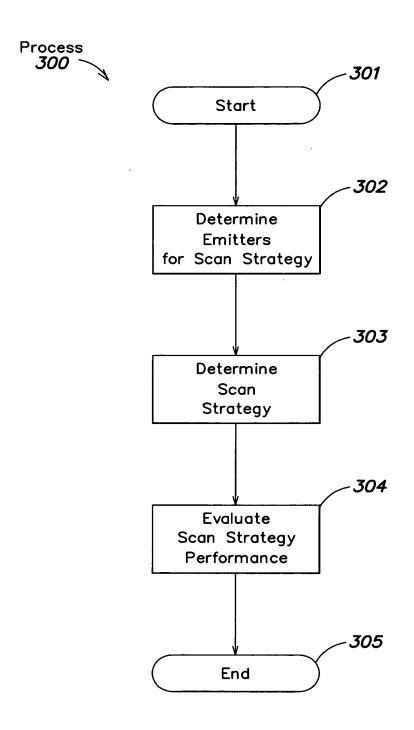


FIG. 3

			Emitter Database 401	Emit Entr 40 .	ry
1		Emitter	Parameters		
	Emitter Model	Dwell Solution(s)	Constraints	Rules	
				(
			•		
			•	,	
N					

GOUNALIS, Anthony J. Serial No.: 10/675,528

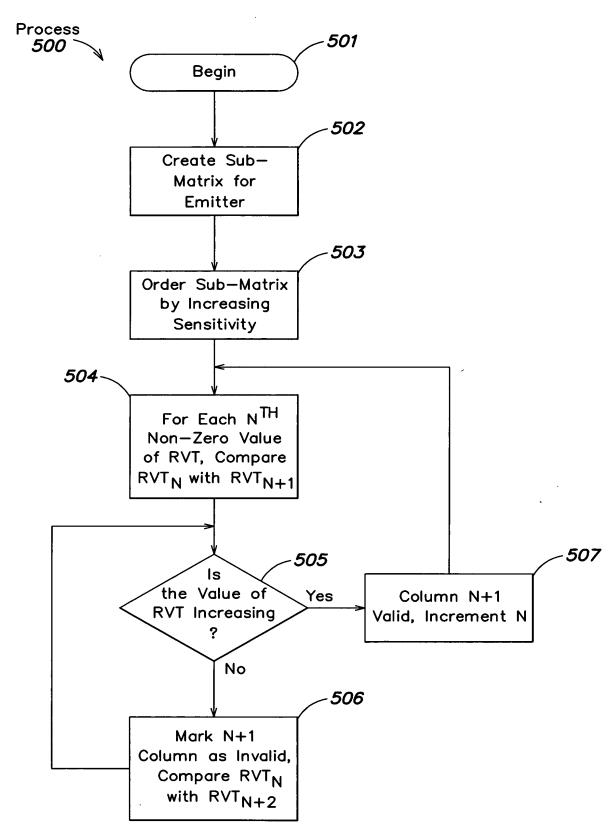
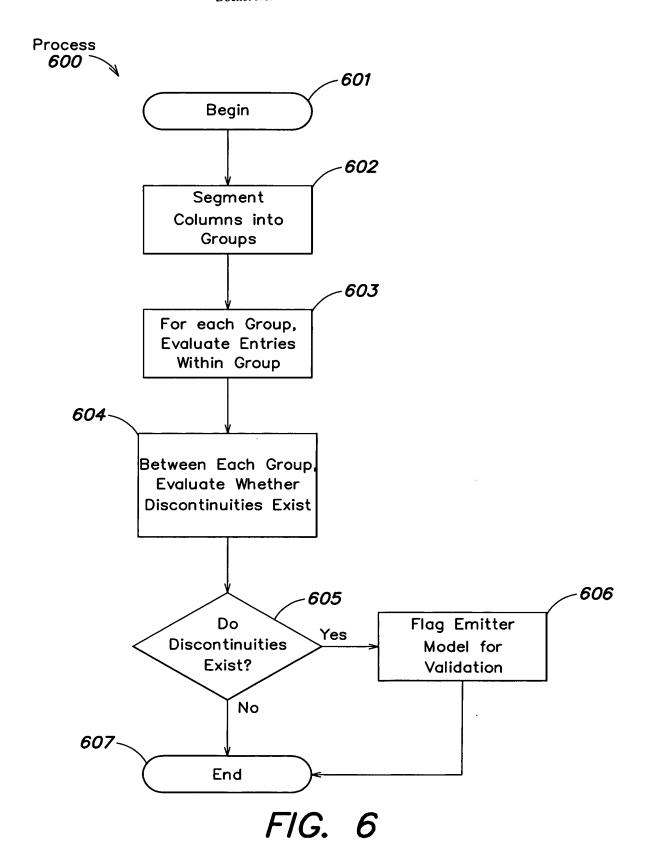


FIG. 5



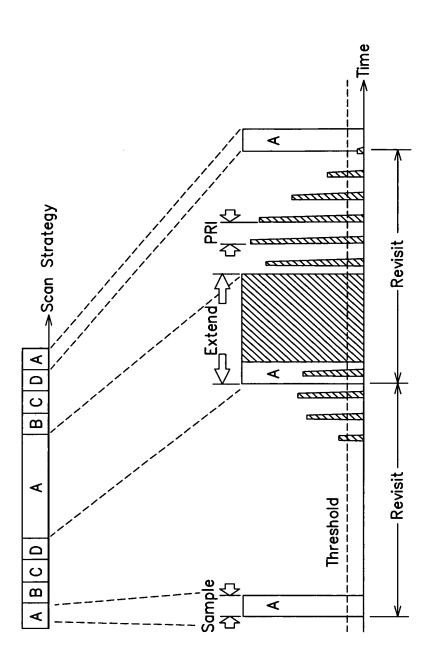
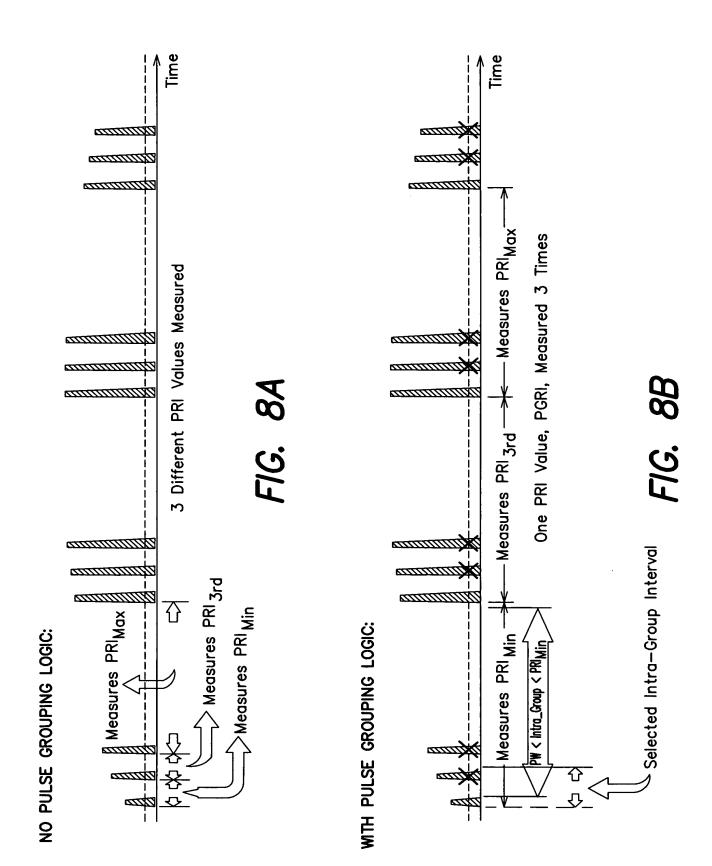
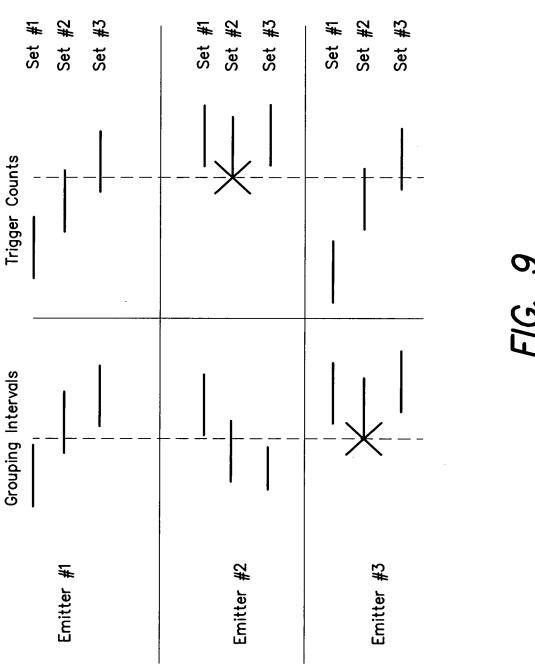
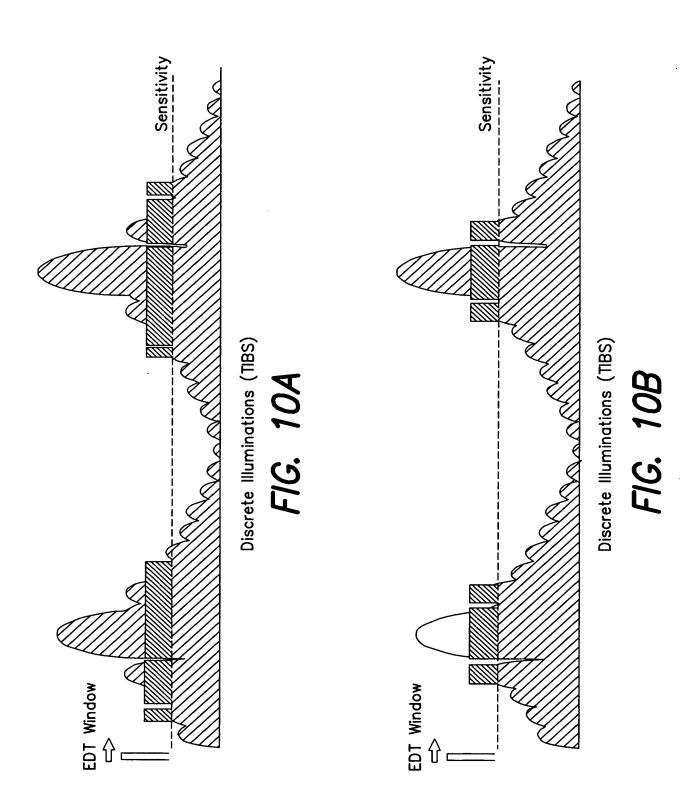


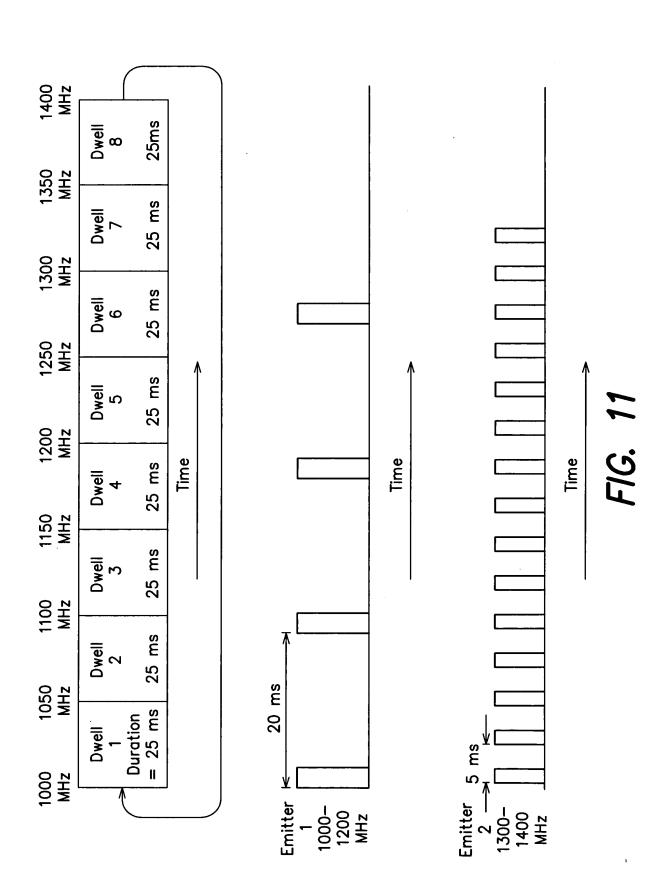
FIG. 7

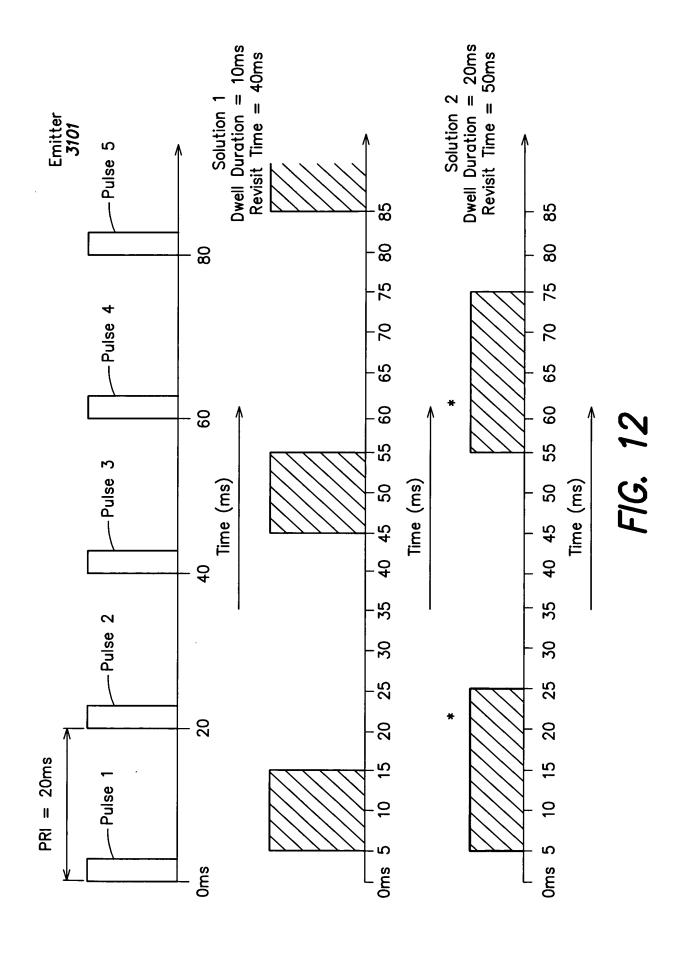






GOUNALIS, Anthony J. Serial No.: 10/675,528 Docket No.: L0562.70041US00





	_			
Min MDT (ms)	3	2	2	4
RF Max (MHz)	1300	1350	1810	1860
RF Min (MHz)	1000	1220	1510	1730
Detecting Method 2 30MHz IF/ 15MHz VBW RVT	650 ms	780 ms	330 ms	390 ms
Detecting Method 1 250MHz IF/ 15MHz VBW RVT	100 ms	120 ms	110 ms	130 ms
Emitter Name	E1	E2	E3	E4

			Solution				C 20:	7 1000	Total	31/650 ≈ .048
1250			- ··]	0 1270	Dwell 9	DD Max 5	RVTMin	650	+ Cost = 5/650
					1210 1240	Dwell 8	DD Max 5	RVTMin	650	+ Cost + 5/650
					1180 12	Dwell 7	DD Max	RVTMin	650	+ Cost + 3/650
				05	1150 11	Dwell 6	DD _{Max}	RVTMin	650	+ Cost 3/650
	Dwell 1	$DD_{Max} = 5$	$RVT_{Min} = 100$	Cost = 5/100 = .05	1120 11	Dwell 5	DD Max	RVTMin	650	+ Cost 3/650
		MOO	RVT	Cost	1090	Dwell 4	DD _{Max}	RVTMin	650	+ Cost 3/650
					1060 10	Dwell 3	DD Max	RVTMin	650	+ Cost 3/650
					1030 10	Dwell 2	DD Max	RVTMin	650	+ Cost 3/650
000					1000	Dwell 1	DD Max	RVTMin	650	Cost 3/650
=					7					

FIG. 14A

		10.14.11.00	Solution		1780	Dwell 9	DD Max	RVT _{Min} 330 ms
1760					1750	Dwell 8 Dwe	DD _{Max} DD _h	RVT _{Min} RVT
					1690 1720	Dwell 7 D	DD _{Max} C	RVT _{Min} F
		SL	SE	= .012	1660 169	Dwell 6	DD Max	RVT _{Min} 330 ms
	Dwell 1	$DD_{Max} = 4 ms$	$RVT_{Min} = 330 \text{ ms}$	$\cos t = 4/330 = .01\overline{2}$	1630 16	Dwell 5	DD Max	RVTMin 330 ms
	0	MOO	RVT	Cost	1600 16	Dwell 4	DD Max	RVTMin 330 ms
					1570 16	Dwell 3	DD _{Max}	RVTMin 330 ms
					1540 15	Dwell 2	DD Max	RVTMin 330 ms
1510					1510 15	Dwell 1	DD Max	RVT _{Min} 330 ms

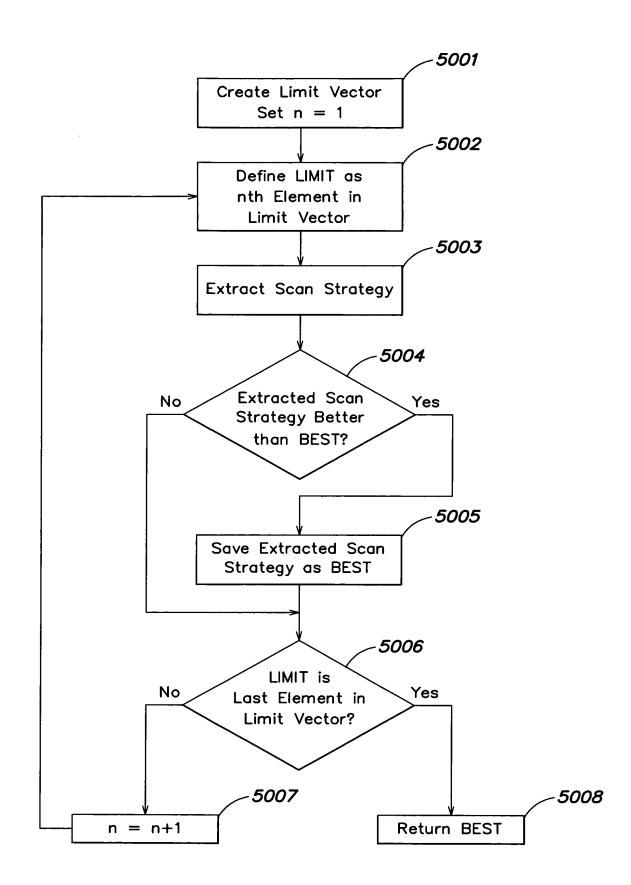


FIG. 15

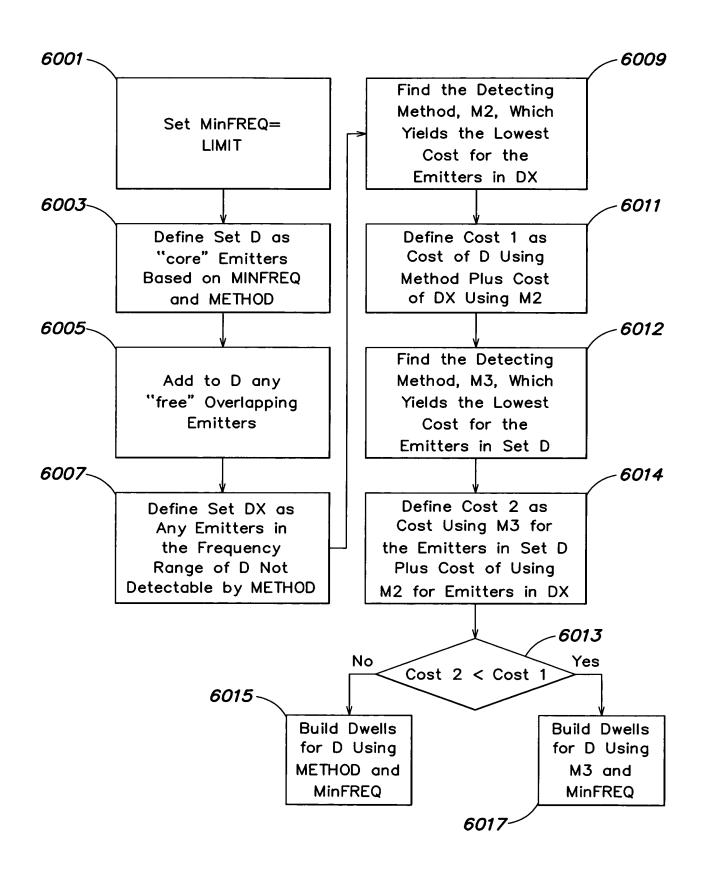


FIG. 16

Name	RF Min	RF Max
E1	1100	1200
E2	1150	1250

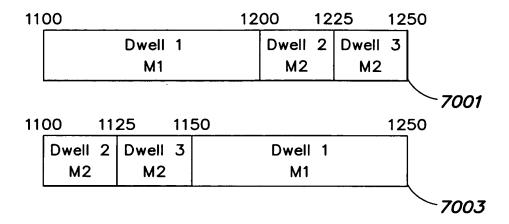


FIG. 17

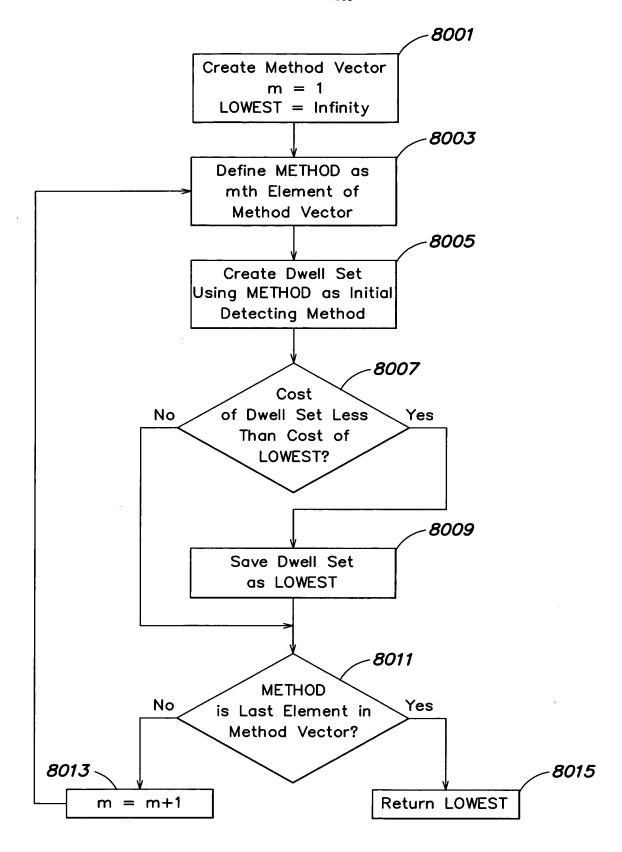


FIG. 18

Docket No.: L0562.70041US00

Emitter	Dwell Duration (ms)	Revisit Time (ms)
Emitter 1	1	500
Emitter 2	2	1200

FIG. 19

Emitter	Dwell Duration (ms)	Revisit Time (ms)	Cost
Emitter 1	1	500	.002
Emitter 2	5	1000	.005

FIG. 20

Dwell 1	Dwell 1 Dwell 1 Dwell 1 Dwell 2	Dwell 1		Dwell 1	Dwell 1 Dwell 2	Dwell 1	Dwell 1 Dwell 2 Dwell 2 Dwell 2 Dwell 2	Dwell 1	Dwell 1 Dwell 2	Dwell 1	Dwell 1 Dwell 2
200	1000	1500	2000	2500		3500	3000 3500 4000	4500	2000	5500	0009
					Time (ms)	ms)	ı				
							^				
				F	FIG. 21	7					

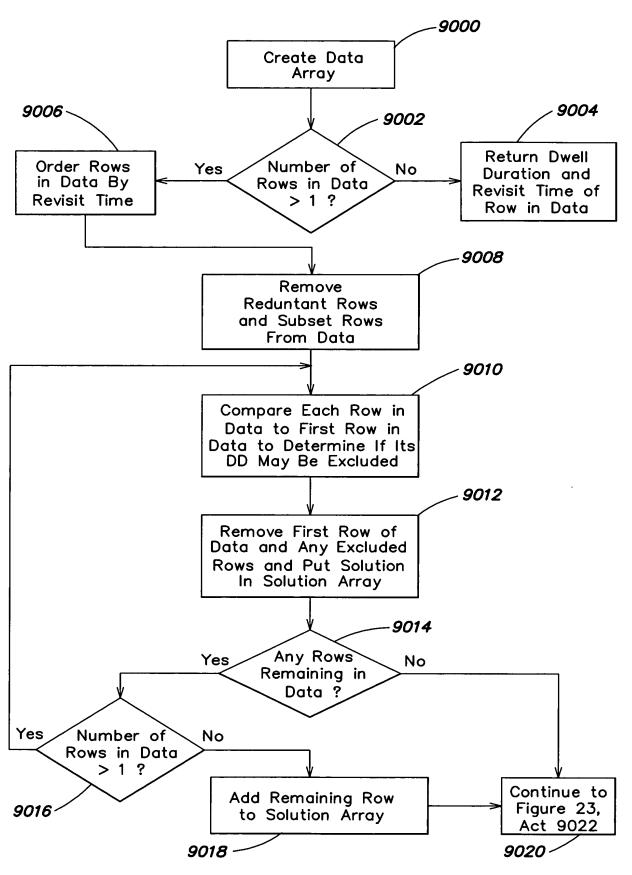


FIG. 22

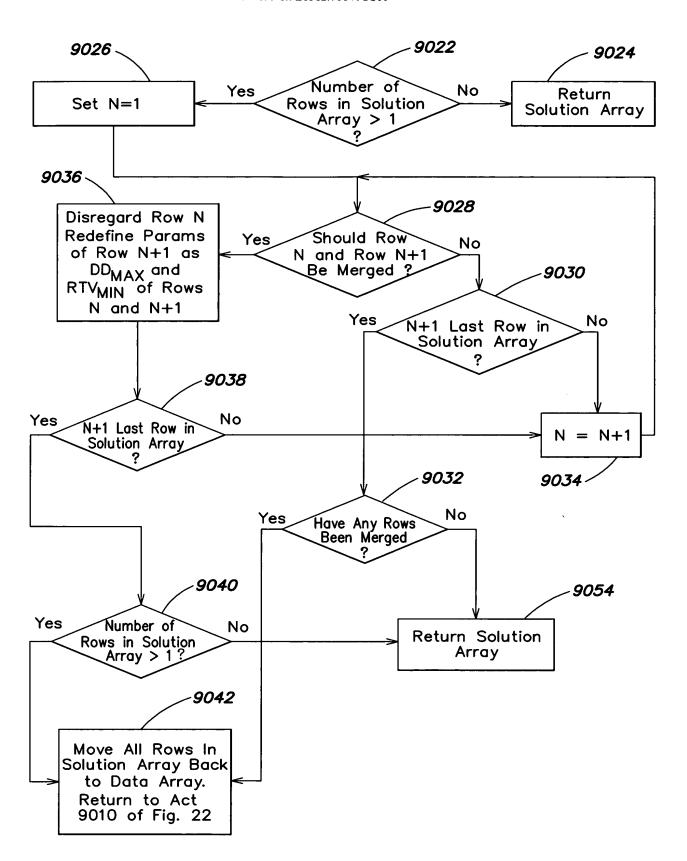
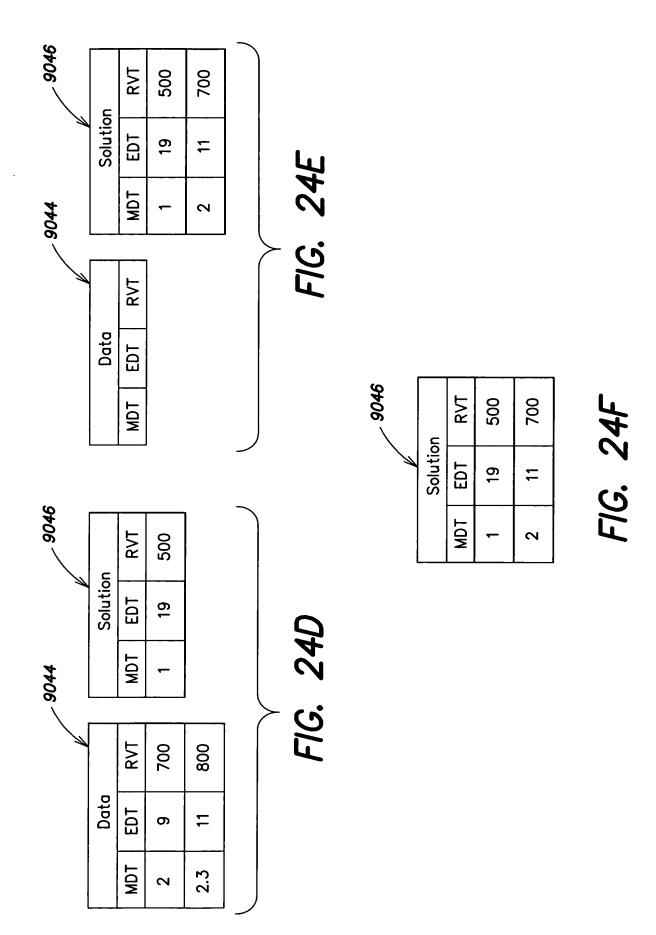


FIG. 23

							- 9051	- 9052		
9044			RVT	200	700	800	2000	2868		
`		Data	EDT	7	6	11	19	17		
			MDT	-	2	2.3	ы	3.05		
9044							9048	9049	— 9050	
			RVT	200	700	800	1000	2000	2000	2868
		Data	EDT	7	6	1	3.5	19	19	17
			MDT	₩.	2	2.3	0.5	3	3	3.05
9044										
	N		RVT	2868	2000	2000	200	700	800	1000
		Data	EDT	17	19	19	7	6	11	3.5
			MDT	3.05	3	3	-	2	2.3	0.5

FIG. 24C



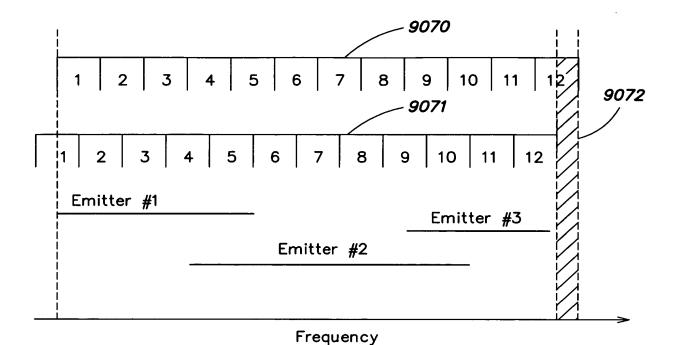


FIG. 25

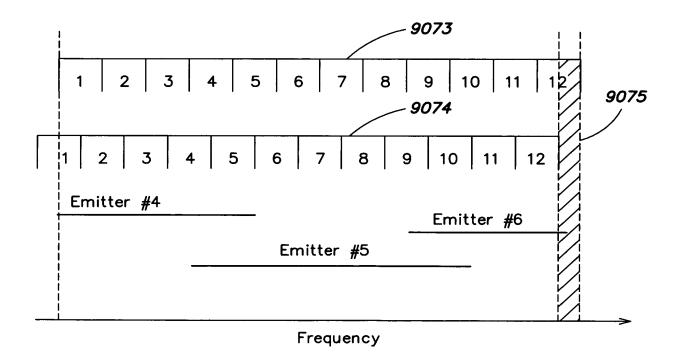
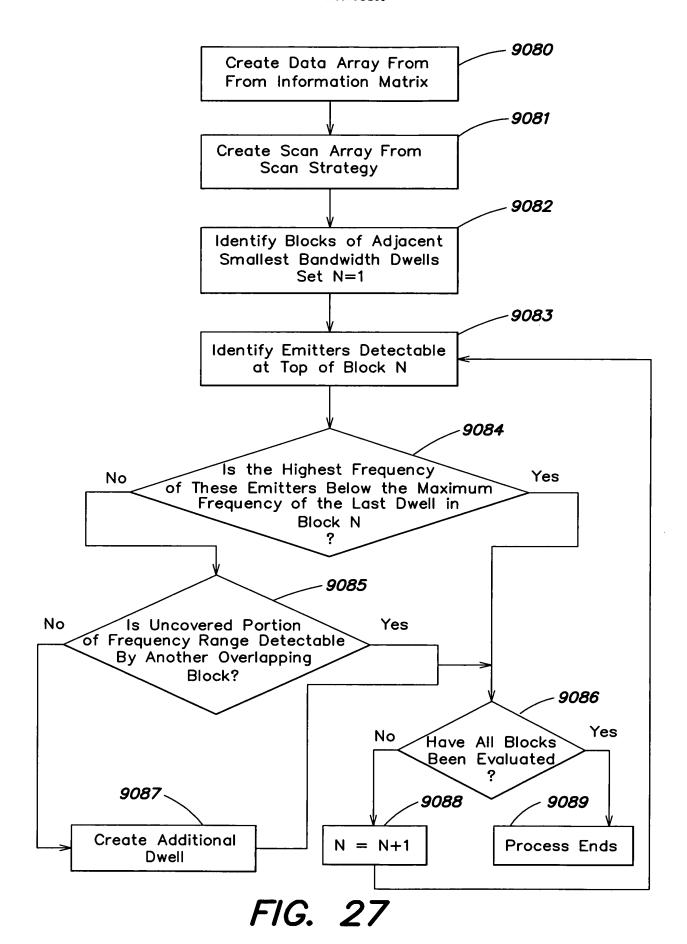
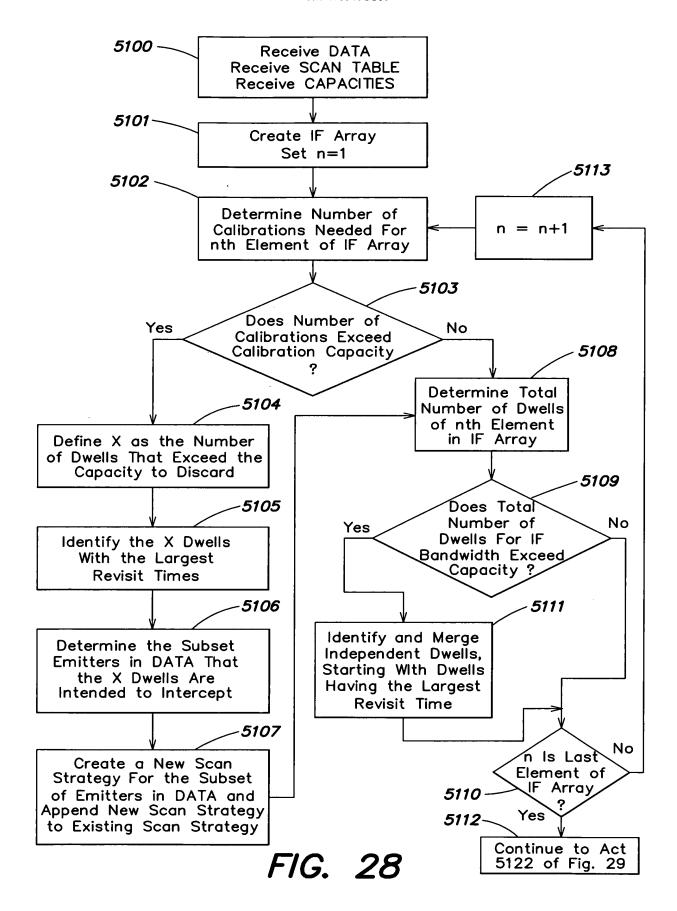


FIG. 26





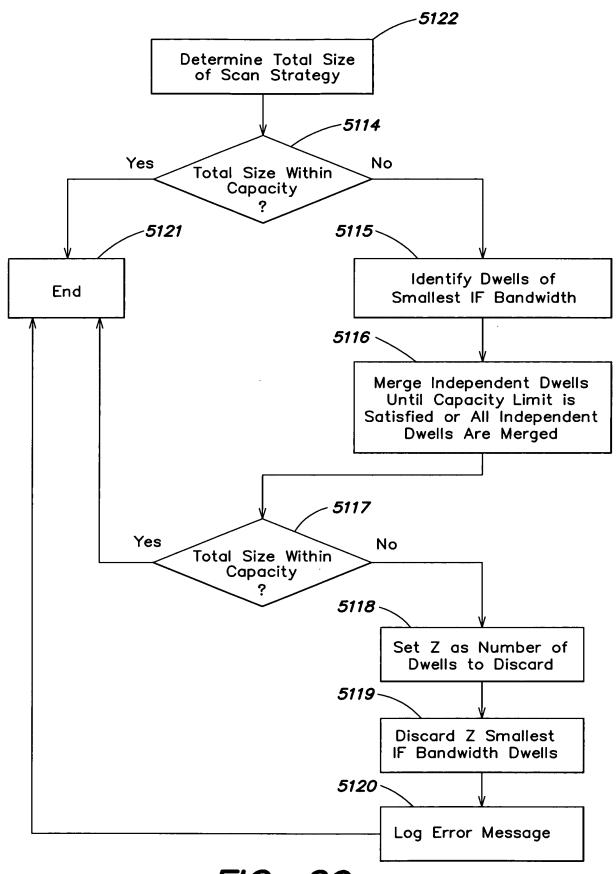
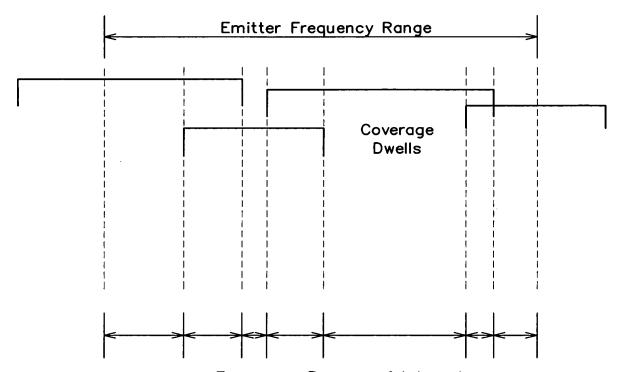


FIG. 29



Frequency Ranges of Interest

FIG. 30

